DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	ARMINGTON LAKE	Lake Area (ha):	57.55
Town:	PIERMONT	Maximum depth (m):	9.7
County:	Grafton	Mean depth (m):	3.7
River Basin:	Connecticut	Volume (m^3):	2125500
Latitude:	43°57'25" N	Relative depth:	1.1
Longitude:	71°58'15" W	Shore configuration:	1.67
Elevation (ft):	1334	Areal water load (m/yr):	6.10
Shore length (m):	4500	Flushing rate (yr^{-1}):	1.70
Watershed area (ha):	553.6	P retention coeff.:	0.62
% watershed ponded:	0.0	Lake type:	natural w/dam

BIOLOGICAL:		6 January 1992	12 August 1991
DOM. PHYTOPLANKTON (% TOTAL)	#1	DINOBRYON 75%	CHRYSOSPHAERELLA 55%
	#2	UROGLENOPSIS 15%	MALLOMONAS 30%
	#3		
PHYTOPLANKTON ABUNDANCE (cells/mL)			310
CHLOROPHYLL-A (µg/L)			3.65
DOM. ZOOPLANKTON (% TOTAL)	#1	SPARSE - NO DOMINANT	KELLICOTTIA 34%
	#2		NAUPLIUS LARVA 17%
	#3		
ROTIFERS/LITER		7	46
MICROCRUSTACEA/LITER		4	28
ZOOPLANKTON ABUNDANCE (#/L)		13	76
VASCULAR PLANT ABUNDANCE			Scattered
SECCHI DISK TRANSPARENCY (m)			5.8
BOTTOM DISSOLVED OXYGEN (mg/L)		11.1	0.1
BACTERIA (fecal col., #/100 ml)	#1		< 1
	#2		1
	#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None
Hypolimnion volume (m^3) : None
Anoxic volume (m^3) : 800

CHEMICAL:

Lake: ARMINGTON LAKE
Town: PIERMONT

	6 January 1992		12 August 1991		
DEPTH (m)	2.5	5.0	3.5		8.5
pH (units)	6.2	6.0	6.8		6.3
A.N.C. (Alkalinity)	2.7	3.0	3.7		4.2
NITRATE NITROGEN			< 0.05		
TOTAL KJELDAHL NITROGEN					
TOTAL PHOSPHORUS	<0.001	0.001	0.004		
CONDUCTIVITY (μmhos/cm)	30.4	30.7	29.2		30.2
APPARENT COLOR (cpu)	< 5	5	12		18
MAGNESIUM			0.40		
CALCIUM			2.3		
SODIUM			1.6		
POTASSIUM			< 0.40		
CHLORIDE			2		
SULFATE			5		
TN : TP					
CALCITE SATURATION INDEX			3.6		

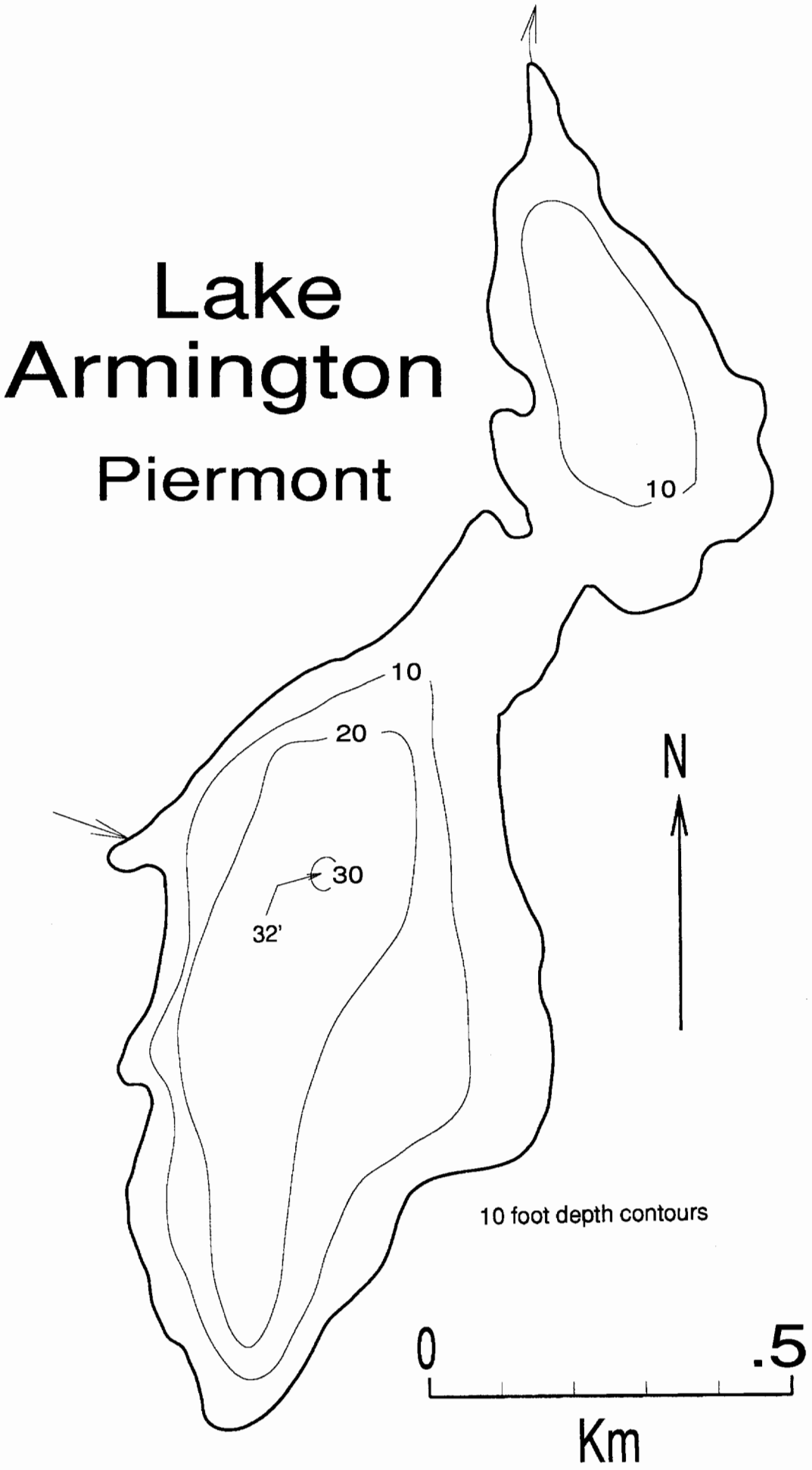
All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1991

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	1	1	0	2	Oligo.

COMMENTS:

1. This lake was previously surveyed in 1979 and has participated in DES' Volunteer Lake Assessment Program. There was no change in trophic classification and little change in water quality since 1979.
2. The dominant classes of wholewater phytoplankton were bluegreens (40%) and golden-browns (Chrysophytes) (35%). Merismopedia (25%) and Mallomonas (25%) were the dominant genera.
3. A good launch site was present off Rt. 25C near the town line.
4. A juvenile camp (Camp Walt Whitman) was located along the shore.


Lake
Armington
Piermont
10
10
20
30
32'
N
10 foot depth contours
0
.5
Km

FIELD DATA SHEET

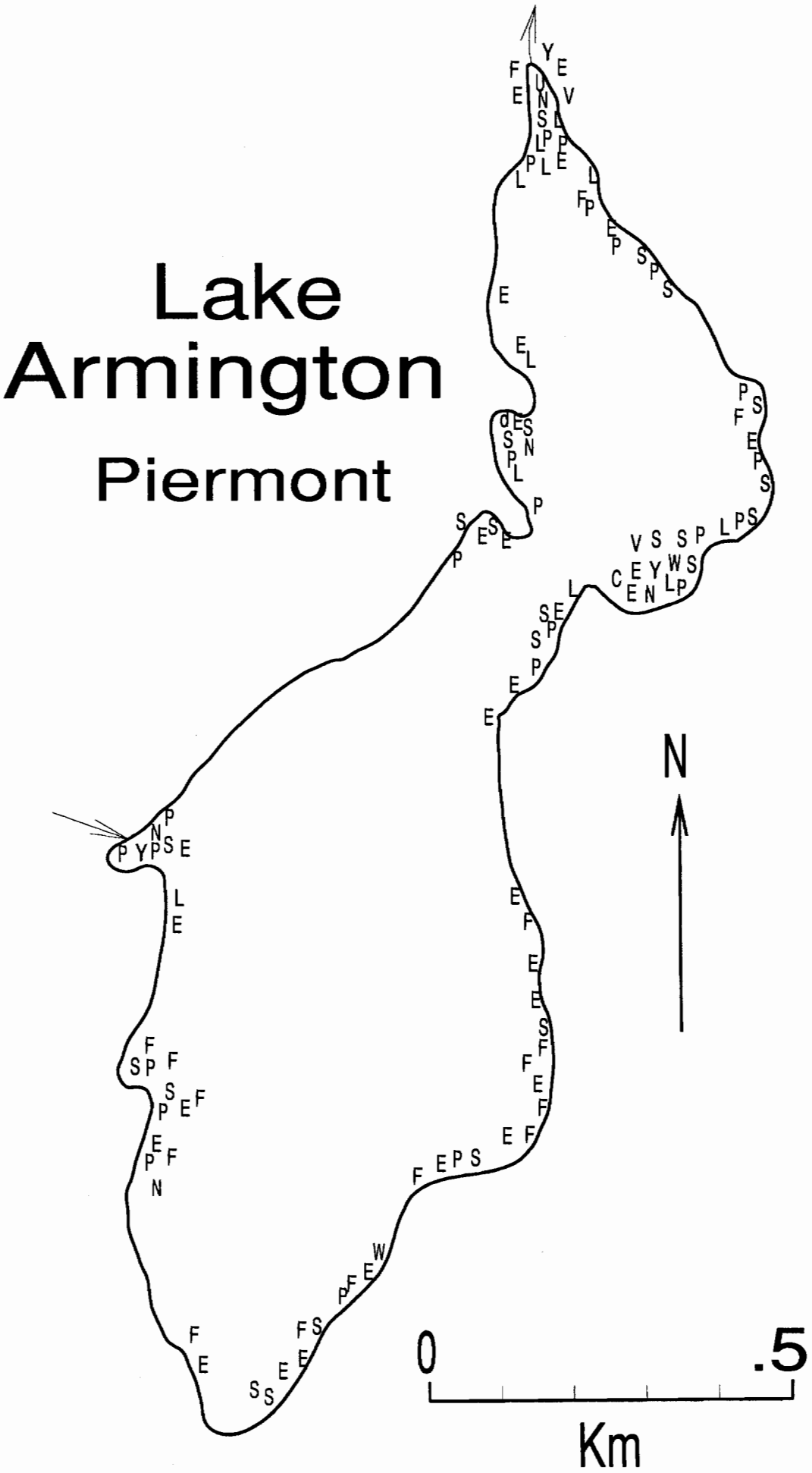
LAKE: ARMINGTON LAKE — TOWN: PIERMONT
DATE: 08/12/91 — WEATHER: PARTLY SUNNY; COOL & WINDY

	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	22.0	8.0	92 %
	1.0	21.6	8.0	90 %
	2.0	21.2	8.0	90 %
	3.0	21.2	8.0	90 %
	4.0	21.0	7.9	87 %
	5.0	21.0	7.7	85 %
	6.0	20.5	7.5	82 %
	7.0	20.5	7.1	78 %
	8.0	19.5	4.5	48 %
	9.0	17.0	0.1	1 %

SECCHI DISK (m): 5.8
BOTTOM DEPTH (m): 9.5
TIME: 1350

COMMENTS: Although the lake was not thermally stratified, there was a depletion of dissolved oxygen in the very bottom waters.

*Dissolved oxygen values are in mg/L


Lake
Armington
Piermont
N
0
.5
Km

AQUATIC PLANT SURVEY

LAKE: ARMINGTON LAKE TOWN: PIERMONT DATE: 08/12/91

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
P	Pontederia cordata	Pickerelweed	Scattered
S	Sparganium	Bur reed	Scattered
N	Nymphaea	White water lily	Sparse
d	Dulichium arundinaceum	Three-way sedge	Sparse
E	Eriocaulon septangulare	Pipewort	Scattered
L	Lobelia dortmanna	Water lobelia	Sparse
V	Vallisneria americana	Tape grass	Sparse
U	Utricularia	Bladderwort	Sparse
F	Nymphoides cordatum	Floating heart	Scattered
Y	Nuphar	Yellow water lily	Sparse
W	Potamogeton	Pondweed	Sparse
C	Callitriche	Water starwort	Sparse

OVERALL ABUNDANCE: Scattered

GENERAL OBSERVATIONS:

1. Plants were sparse in much of the lake but were common in the small coves, resulting in an overall rating of scattered.